What is a model?

All models are wrong, but some are useful!
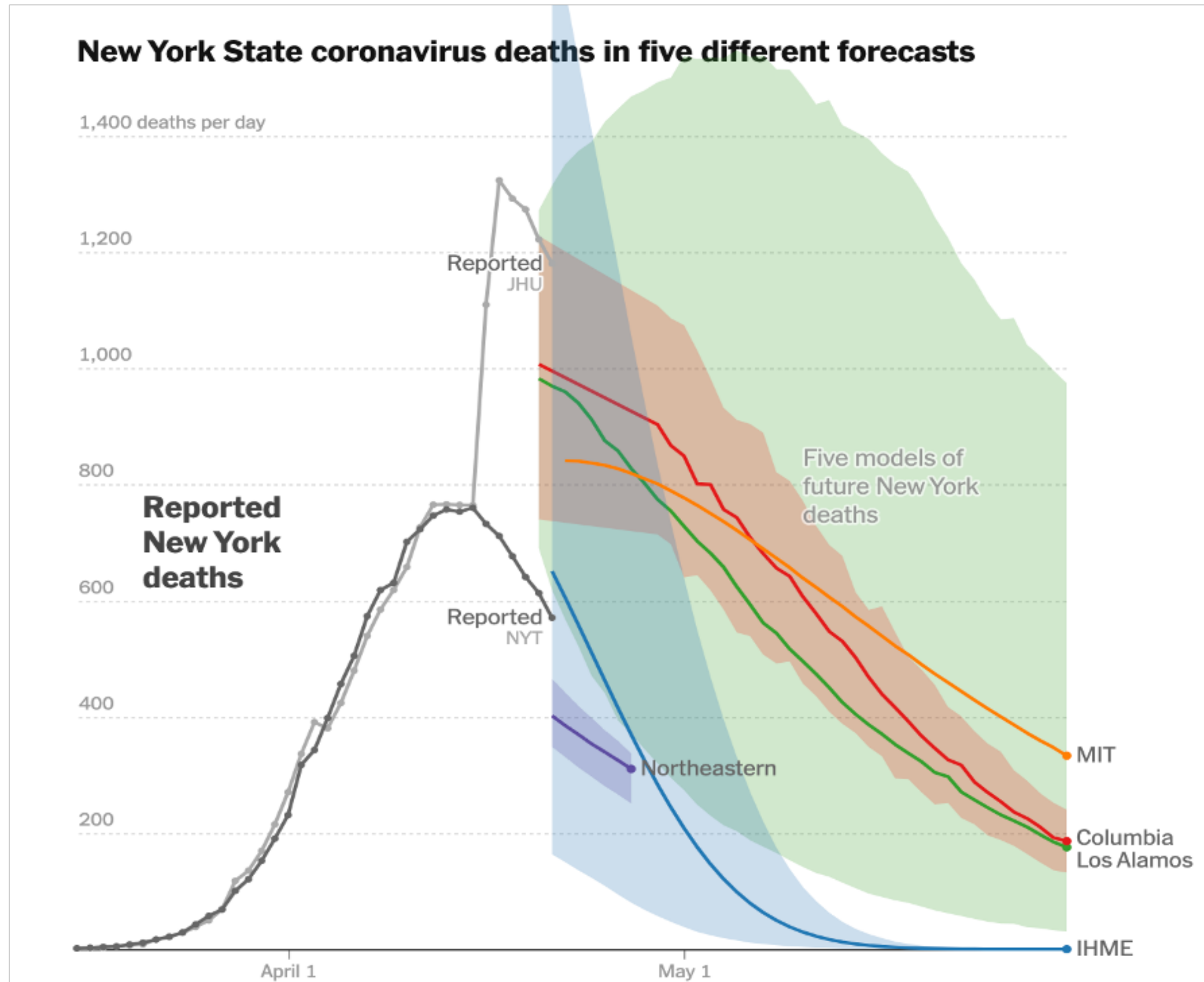
George Box, 1919-2013

Which model is better?

The goodness of a model depends entirely on its **purpose.**

Models are **simplified representations** of a thing that help us to **predict** or **explain** its behavior.

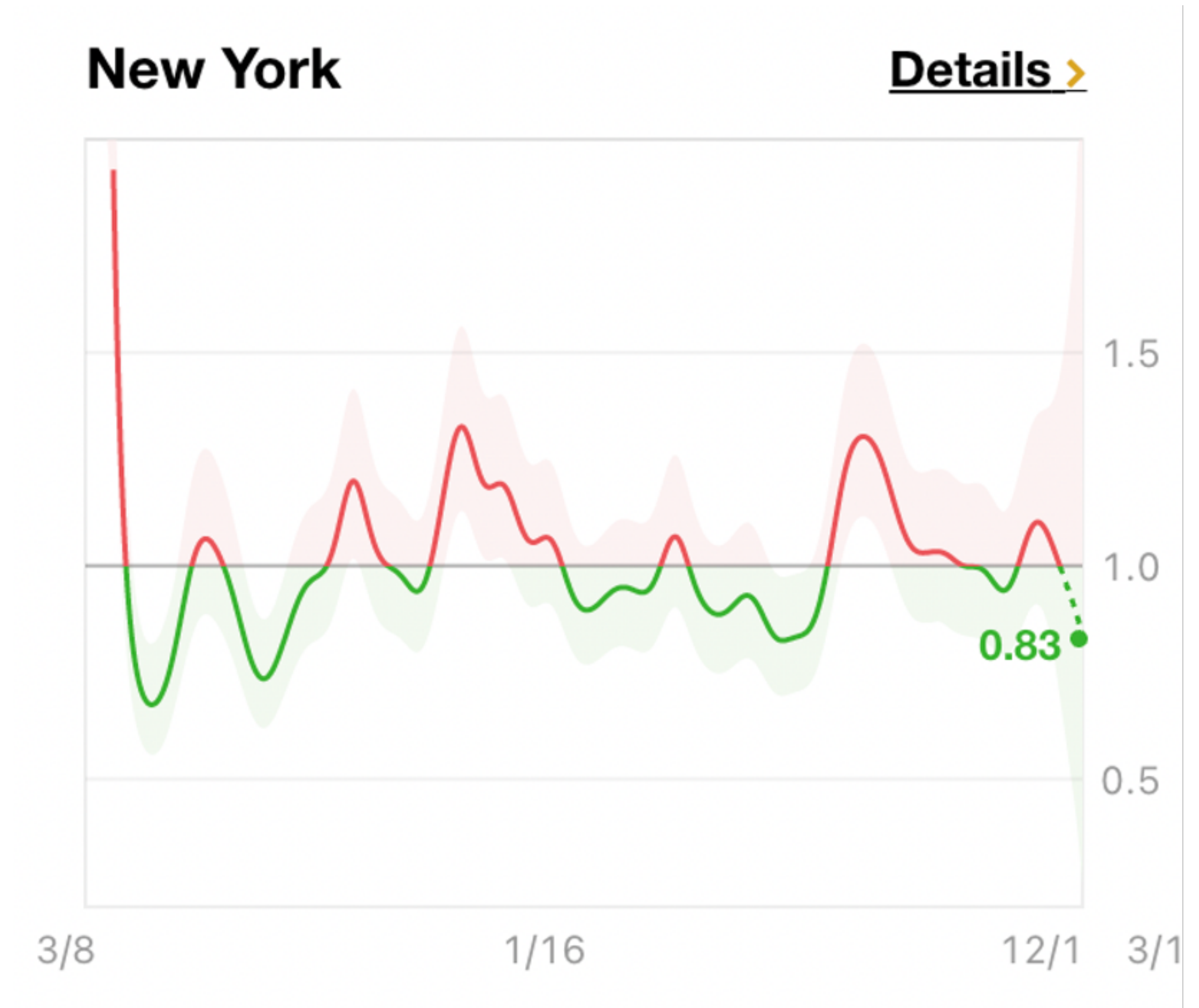Sometimes we can create a model using mathematics.

How have mathematical models been used during the COVID-19 pandemic?

Forecasting incidence

Estimating key transmission parameters

We'll learn the machinery behind these models today!